

APPLICATION SERIAL NO. 10/649,344

PATENT

AMENDMENTS TO THE CLAIMS

Kindly amend claims 4, 11, 18, 21, 26, 35 and 36 and cancel claim 23. The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claims 1-3 (cancelled)

Claim 4 (currently amended): A foldable truss member, comprising:
a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising:
an elongated support member having a side surface;
a bridging member hingedly connected to the side surface of the support member at an attachment point of the support member, the bridging member having an extension at an edge of the bridging member opposite the attachment point; and
a plurality of hinge members pivotally joining the extension of each side member to a support member of an adjacent side member, each hinge member having comprise surfaces frictionally engaging the bridging members and a channel for said bridging member and wherein said support member forms a part of the hinge together with said channel which captures said bridging member, thereby allowing relative rotation of adjacent side members, a plurality of edges between adjacent side members defining a plurality of corners of the truss member.

Claims 5-10 (cancelled)

Claim 11 (currently amended): A foldable truss member, comprising:
a plurality of side members each having at least four sides including two adjacent side edges, the side members adjacently arranged so that the lower side edges of the four adjacently arranged ~~side members~~ sides ~~form~~ define a closed shape; and
a plurality of hinges affixed to each of the two adjacent edges of each side member, the hinges allowing relative rotation between adjacently arranged side members so that the side member means are foldable into a substantially flat assembly,

APPLICATION SERIAL NO. 10/649,344

PATENT

the side edges of the side member means defining a plurality of corners of the truss member.

Claims 12-13 (cancelled)

Claim 14 (previously presented): The truss member according to claim 11, wherein the hinges comprise surfaces frictionally engaging the bridges and the hinges are fixedly connected to the side members.

Claims 15-17 (cancelled)

Claim 18 (currently amended): A method of operating a foldable truss member capable of moving from a substantially flat to an open deployed position, comprising: adjacently bridging a plurality of side members to form a peripheral boundary for each of the truss members, each of the side members including an elongated edge hingedly attached to an adjacent side member, the elongated edges of the side members defining a plurality of corners of the truss member;

rotating the adjacent side members about the elongated edges to put the side members of the truss member in a deployed configuration; and

creating a variable rotational resistance between said side members so that it is necessary to overcome a holding force when said truss member is in a deployed position and is being moved toward a folded position, to generally maintain said truss in a deployed position.

Claims 19-20 (cancelled)

Claim 21 (currently amended): A foldable truss member moveable between a substantially folded and open deployed positions, comprising:

a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising:

an elongated support member having a side surface;

APPLICATION SERIAL NO. 10/649,344

PATENT

a bridging member hingedly connected to the side surface at an attachment point of the support member,

a plurality of hinge members pivotally joining the bridging member to the support member and an adjacent side member, each hinge member allowing relative rotation of the side members

at least one of said hinge members being having a center portion configured to tend to maintain urge said bridging member to in a position corresponding to the deployed position of said truss member by virtue of said hinge member providing less resistance to rotation in said center portion and greater resistance to rotation elsewhere, so that when said truss system is deployed, it will tend to stay in a deployed state.

Claim 22 (previously presented): The truss member according to claim 21, wherein the hinge members comprise surfaces frictionally engaging the bridging members and wherein said frictional engagement is variable across said hinge member's surface.

Claim 23 (cancelled)

Claim 24 (previously presented): The truss member according to claim 21, wherein the hinge members comprise a block member affixed to said support member having a channel therethrough, said channel being sized to frictionally receive a movable bridging member.

Claim 25 (previously presented): The truss member according to claim 21, wherein the block member includes a channel for said bridging member and where said channel includes at least one filleted inner surface which contacts said bridging member.

Claim 26 (currently amended): The truss member according to claim 21, wherein the block member includes a generally U-shaped channel for said bridging member and where said channel is radiused to provide rotational resistance between said channel and said bridging member.

APPLICATION SERIAL NO. 10/649,344

PATENT

Claim 27 (previously presented): The truss member according to claim 25 wherein said channel includes predetermined bend radius, and where said bridging member includes a curved portion sized to be received within said channel and having a predetermined bend radius different from said channel radius, thereby creating frictional interference between said channel and said bridging member.

Claim 28 (previously presented): The truss member according to claim 21 wherein said block member includes a hinge channel therethrough and plurality of surfaces along said channel including a central surface and a flared surface.

Claim 29 (previously presented): The truss member according to claim 28 wherein said flared surface includes a partially flattened region positioned such that, when said truss is in its deployed state, said a portion of said bridging member will be urged into said partially flattened region.

Claim 30 (previously presented): The truss member according to claim 23 wherein block includes a channel having an inner surface and at least one side surface extending from said channel, and wherein said side surface has a trough section and flared sections on either side thereof, and where said side surface is configured to urge said bridging member into said trough when in said deployed state.

Claim 31 (previously presented): The truss member according to claim 30 wherein said trough section and said bridge member are configured to provide feedback resistance whenever said truss is moved from a deployed state toward a folded state.

Claim 32 (previously presented): The truss member according to claim 21 wherein said hinge members include primary hinge members and secondary hinge members, said primary hinge members configured to urge said bridging members to a position corresponding to the deployed position of said truss member, and said secondary hinge member being free swinging.

APPLICATION SERIAL NO. 10/649,344

PATENT

Claim 33 (previously presented): The truss member of claim 32 wherein said primary and secondary hinge members are apportioned to tune the deployment force of said hinge members.

Claim 34 (previously presented): The truss member of claim 32 wherein said primary and secondary hinge members are commingled on the truss member to permit adjustment of deployment force of said hinge members.

Claim 35 (currently amended): A foldable truss member moveable between a substantially folded and open deployed positions, comprising:

a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising:

an elongated support member having a side surface;

a bridging member hingedly connected to the side surface at an attachment point of the support member,

at least one hinge members pivotally joining the bridging member to the support member and an adjacent side member, said hinge member allowing relative rotation of the side members

said at least one hinge member[[s]] having a center portion being configured to urge tend to maintain said bridging member[[s]] [[to]] in hinge a position corresponding to the deployed position of said truss member by virtue of said member providing less resistance to rotation in said center portion and greater resistance to rotation elsewhere, ~~and providing feedback resistance when said truss member is not in said deployed position~~, so that when said truss system is deployed, it will tend to stay in a deployed state.

Claim 36 (currently amended): A foldable truss member moveable between a substantially folded and open deployed positions, comprising:

a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising:

an elongated support member having a side surface;

APPLICATION SERIAL NO. 10/649,344

PATENT

a bridging member hingedly connected to the side surface at an attachment point of the support member,

at least one first and second hinge members pivotally joining the bridging member to the support member and an adjacent side member, said hinge member allowing relative rotation of the side members

said at least one first hinge member ~~[[s]]~~ having a center portion being configured ~~urge to tend to maintain~~ said bridging member ~~[[s]]~~ [[to]] a position corresponding to the deployed position of said truss member by virtue of in said hinge member providing less resistance to rotation in said center portion and greater resistance to rotation elsewhere. so that when said truss system is deployed, it will tend to stay in a deployed state and said at least one second hinge member being substantially free-swinging, ~~so that a combination of first and second hinge members are employed to tune the urging force to a predetermined level.~~